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keep *S. chrysotrichum* separate from Persoon's species. VERA CRUZ, Cordoba, alt. 830 m., Aug. 20, 1891 (*H. E. Seaton*, no. 395); Jico, July 16, 1893 (*E. W. Nelson*, no. 24); Orizaba, Jan. 28, 1894 (*E. W. Nelson*, no. 45); OAXACA, Calderon, alt. 1,850 m., San Juan del Estado, June 18, 1894 (*L. C. Smith*, no. 36); near Reyes, alt. 1,785 to 2,060 m., Oct. 24, 1894 (*E. W. Nelson*, no. 1785); CHIAPAS, near Tumbala, alt. 1,230 to 1,690 m., Oct. 20, 1895 (*E. W. Nelson*, no. 3331); GUATEMALA, Santa Rosa, alt. 925 m., June, 1892, San Miguel Uspantán, alt. 1,850 m., Apr., 1892 (*Heyde & Lux* in exsicc. J. D. Smith, nos. 3441, 3448); COSTA RICA, Cartago, alt. 1,650 m., Dec., 1887 (*Juan J. Cooper*, in exsicc. J. D. Smith, no. 5870).

Three species of the subsection *Torvaria*, described from Mexico, are still obscure and perhaps not recently collected. These are *S. amictum*, Moric. in Dunal l. c. 263; *S. rude-pannum*, Dunal, l. c. 264; *S. Lambertii*, Dunal, l. c. 268.

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### III. — SOME UNDESCRIBED MEXICAN PHANEROGAMS, CHIEFLY LABIATAE AND SOLANACEAE.

**Pelexia Pringlei.** Roots clustered, cylindric, whitish, tuberiform, 0.5 to 1 dm. long: leaves 3, at the base of the bracteate scape, long-petioled, with smooth entire oblong to ovate-lanceolate acuminate blades 8 to 12 cm. long, about 4 cm. wide: scape about 3 dm. high, sparingly pubescent above, with about 8 sheathing lanceolate bracts: spike 1 dm. long, rather loosely flowered: bracts lance-acuminate, 3 cm. long, much exceeding the ovary: sepals greenish, lanceolate, acuminate, two of them free and somewhat drooping, 2 cm. long, the others united to form a blunt galea; lip short and rounded, exceeded by the beak of the stigma; spur adnate to the ovary: anther ovate, bluntish, 5 m. long. —VERA CRUZ, wooded hills near Jalapa, alt. 1,230 m., April, 1899 (*C. G. Pringle*, no. 8122). Habitally resembling *P. setacea*, Lindl. (*Neottia calcarata*, Hook. Bot. Mag. t. 3403), but with adnate spur, and shorter blunter sepals galea and lip.

**Scutellaria distans.** Stems slender, flexuous, 3 to 4 dm. long, somewhat recurved-pilose on the angles; internodes rather long (3 to 5 cm.): leaves firm, sparingly appressed-pubescent or glabrate, fan-shaped, broader than long, upper from deltoid-ovate to rhombic-ovate,

short-acuminate, coarsely crenate above the rounded or truncate base, 2 to 5 cm. long, 2 to 3.5 cm. wide: flowers solitary in the axils, on slightly pilose pedicels 0.5 cm. long: calyx pilose in lines, in anthesis 4 to 5 mm. long: corolla dark blue, arcuate, 2 to 2.5 cm. long, puberulent without; the lower lip slightly longer than the upper, with a white spot in the middle. — JALISCO, in the Sierra Madre, west of Bolaños, Sept. 15–17, 1897 (*J. N. Rose*, no. 2951). Related to the northern *S. galericulata*, L.

**S. Rosei.** Apparently tall (upper portions of plants at hand 6 to 7 dm. high): stem short cinereous-pubescent: lower leaves suborbicular, rounded at tip, upper ovate, acuminate, coarsely crenate-dentate, rounded or subcordate at base, minutely soft-pubescent on both sides, 4 to 6 cm. long, 3 to 4 cm. wide, on very short pubescent petioles 1 to 3 mm. long: raceme elongated, 2 to 2.5 dm. or more in length: the flowers irregularly scattered, alternate, opposite or fascicled: bracts lanceolate, about equalling the glandular-hirsute pedicels: calyx somewhat glandular-hirsute, in anthesis 3 to 4 mm. long: corolla 2 to 2.5 cm. long, rose-purple above; the pubescent tube pale; the lower lip somewhat exceeding the upper. — SINALOA, foothills of the Sierra Madre, near Colomas, July 20, 1897 (*J. N. Rose*, no. 1784). *Ghiesbreght's* nos. 88 and 803 from CHIAPAS are probably forms of the species, though with smaller corollas.

**S. Pedicularis.** Stems slender, minutely cinereous-puberulent: leaves oblong or ovate-oblong, coarsely crenate-dentate, short-acuminate and blunt at tip, rounded or subtruncate at base, sparsely pubescent above with short appressed hairs, glabrous beneath, 2 to 3.5 cm. long, 1 to 2 cm. wide, on slender finely-puberulent petioles 1.5 to 2 cm. long: raceme 15–25-flowered, at first dense, resembling *Pedicularis canadensis*: bracts linear or lanceolate, equalling the pedicels (3 to 5 mm. long): calyx puberulous, in anthesis 3 to 3.5 mm. long, in fruit becoming 8 to 9 mm. long: corolla yellowish, 2.5 cm. long, the tube barely 2 mm. in diameter nearly to the slightly broader throat; lower lip a little longer than the upper: seeds roughish, not margined. — CHIAPAS, near Tumbala, alt. 1,230 to 1,700 m., Oct. 20, 1895 (*E. W. Nelson*, no. 3342). The specimens are rather fragmentary, so that the base of the plant cannot now be described. Nearly related to the showy *S. Mociniana*, Benth., which has much longer scarlet corollas.

**Stachys (Stachyotypus) flaccida.** Ascending or spreading, freely branched, 4 dm. high or more (?): stems minutely pilose or glabrate; internodes 1 dm. long: leaves thin and flaccid, glabrous or minutely appressed-pubescent beneath, the lower on slender petioles, the upper

becoming sessile, deltoid-ovate to oblong, cordate at base, coarsely crenate, 3 to 7 cm. long: verticels 3-6-flowered, remote, only the lower conspicuously leafy-bracteate: pedicels very short: calyx minutely puberulent, in anthesis 6 mm. long, cleft half way to the base into lance-subulate teeth: corolla apparently pale, 1.1 to 1.3 cm. long; the tube once and a half as long as the calyx; the 3-lobed lower lip twice as long as the entire short pubescent galea. — OAXACA, Hacienda de Caciques, District of Cuicatlan, Aug. 4, 1895, alt. 2,150 m. (*L. C. Smith*, no. 612). Apparently related to *S. Drummondii*, Benth.

**S. (*Calostachys*) oaxacana.** Stems slender, 2.5 to 6 dm. high, densely retrorse-hispid below, sparingly so or only glandular-puberulent above: leaves deltoid-ovate to deltoid-lanceolate, coarsely crenate, cordate or truncate at base, 1.5 to 3.5 cm. long, above somewhat strigose-pubescent, beneath more or less pubescent, often white with appressed longitudinally spreading stiffish hairs; petioles slender, the lower equalling the blades, the upper shorter: verticels 4-6-flowered, rather remote, only the lowest conspicuously bracteate: pedicels about equalling the calyx: calyx green, glandular-puberulent, in anthesis 5 mm. long, in fruit becoming as broad as long, with 5 deltoid-subulate teeth: corolla scarlet, 2 to 2.5 cm. long, minutely puberulent or glabrate without; the 3-lobed lower lip slightly exceeding the entire or emarginate galea. — OAXACA, near Reyes, alt. 2,060 to 3,080 m., Oct. 20, 1894 (*E. W. Nelson*, no. 1795); Sierra de San Felipe, alt. 2,150 m., Sept. 23, 1895 (*C. Conzatti*, in exsicc. *L. C. Smith*, no. 709); mountains of San Juan del Estado, alt. 2,300 m., Oct. 21, 1895 (*L. C. Smith*, no. 924); Cuicatlan, alt. 1,675 m., Dec. 9, 1895 (*V. González*, no. 47). Closely related to *S. coccinea*, Jacq., with which it has formerly been confused, but from which it is distinguished by its very slender habit, smaller calyx and different pubescence.

***Calamintha oaxacana*.** Shrub with smooth brown bark, and very slender minutely puberulent or glabrate branchlets: leaves thin, elliptic-ovate, 1 to 1.5 cm. long, finely and sharply serrate, acute at tip, narrowed or rounded at base; petioles filiform, about equalling the leaf-blades: flowers solitary, axillary, on slender 2-bracteate pedicels 5 to 8 mm. long: calyx tubular, 13-costate, in anthesis 6 to 7 mm. long; the tube twice exceeding the lance-subulate lobes; the upper lip with 3 upturned lobes, the two lobes of the lower straighter: corolla red, 3 to 3.25 cm. long, short-pubescent without. — OAXACA, El Parián-Etla, alt. 1,200 m., Nov. 1898 (*V. González & C. Conzatti*, no. 901). Nearest related to *C. coccinea* of the southern United States. Habit-

ally somewhat resembling *Gardouquia mexicana*, but with the definitely bilabiate lip of *Calamintha*.

**Cunila tomentosa.** Stem tall (probably 8 dm. high), sharply quadrangular, freely paniculate-branched, densely tomentose above and on the younger parts: leaves lanceolate to ovate-lanceolate, acuminate, sessile or short-petioled, entire or sparingly appressed-serrate, above puberulent, beneath densely white-tomentose, 2 to 5 cm. long, 1 to 1.5 cm. wide: racemes dense, spiciform, 1 to 4 cm. long, solitary or in 3's, terminating the short branches: pedicels slender, about equalling the calyx: calyx 2 to 3 mm. long; the tube twice or thrice as long as the lance-subulate teeth, densely villous especially within the throat: corolla villous, slightly exceeding the calyx: stamens mostly included. — OAXACA, between Pluma and San Miguel Suchistepec, alt. 1,850 m., March 21, 1895 (*E. W. Nelson*, no. 2495).

**Hyptis (Cephalohyptis) madreensis.** Stems procumbent, puberulent (densely short-pilose-hirsute on the younger parts), freely branching; internodes 0.5 to 1 dm. long: leaves thickish, oblanceolate to elliptic-obovate, coarsely crenate-dentate above, the subcuneate entire base narrowed gradually to a short petiole, appressed-pilose on both faces, dark green above, pale beneath, 2.5 to 5 cm. long, 1 to 2 cm. broad: peduncles axillary, 3 to 5 cm. long: fruiting head 2 cm. in diameter: bracts foliaceous, lanceolate to oblong, entire or coarsely dentate, 1 cm. or less long: calyx villous, the long subulate teeth setulose. — TEPIC, foothills of the Sierra Madre, near Pedro Paulo, Aug. 3, 1897 (*J. N. Rose*, no. 1958). Resembling, apparently, *H. Parkeri*, Benth., of South America but differing from that in its pubescent leaves and calyx.

**H. (Minthidium) Pringlei.** Stem 1 m. (?) high, freely branching, more or less pubescent with pilose or somewhat strigose hairs: leaves lanceolate, acute, subsessile or short-petioled, entire, essentially glabrous, 2 cm. or less long: flowers axillary, 2 to 6 in a fascicle: pedicels slender, glabrous, becoming 2 mm. long in fruit: calyx glabrous, campanulate, in anthesis 1.5 mm., in fruit 3 to 4 mm. long, cleft one-third to the base into narrowly deltoid subacuminate lobes: corolla slightly exceeding the calyx. — SAN LUIS POTOSI, Tamasopo Cañon, Aug. 5, 1890 (*C. G. Pringle*, no. 3223). Related to *H. verticillaris*, with which it has been confused, but with axillary flowers.

**H. (Minthidium) axillaris.** Similar to the preceding: leaves lanceolate or rhombic-lanceolate, 7 cm. or less in length, acuminate, coarsely and irregularly serrate above the middle, entire below and cuneate to petioles 1 cm. or less long, puberulent above, pilose beneath on the

nerves: calyx sparingly pubescent or glabrate, salverform, with shorter broader lobes. — PUEBLA, near Metlatoyuca, alt. 250 m., Jan. 31, 1898 (*E. A. Goldman*, no. 48).

**H. (*Hypenia* § *Laxiflorae*) *Nelsonii*.** Tall, stem smooth and glossy below, minutely puberulent above: leaves thick, glabrous, rather glaucous, lance-acuminate, slightly auriculate-clasping at base, those of the stem 1.5 to 2 dm. long, with fine short teeth along the margin, the upper much shorter and entire: panicle 4 to 5 dm. long, dichotomous; the lower ascending branches 3 dm. long: bracts ovate-lanceolate, acuminate, puberulent, 1 cm. or less long: ultimate pedicels 0.5 to 1 cm. long: calyx puberulent, campanulate, in anthesis 5 to 6 mm., in fruit 1 cm. long, strongly 13-nerved, slightly bilabiate; the deltoid acuminate lobes one-half as long as the tube: corolla 2 to 2.25 cm. long; the tube constricted below, tubular and slightly enlarged upward; the blunt lobes only 3 or 4 mm. long: styles and anthers exserted, glabrous: nutlets oblong-obovate. — JALISCO, between San Sebastian and the summit of Mt. Bufa de Mascota, alt. 1,850 m., March 20, 1897 (*E. W. Nelson*, no. 4108). A unique plant among the Mexican species, belonging to a section hitherto known only from Brazil and adjacent South America.

***Lycium geniculatum*.** Branches slender, geniculate, covered with pale gray bark; spines slender, on the flowering branches about 8 mm. long, barely 1 cm. apart: leaves very glaucous, glabrous, oblong to obovate, blunt or acute, 2.5 cm. long or less, on slender petioles 1 cm. or less in length: flowers abundant in small cymes, terminating the rather crowded short ultimate branchlets: pedicels 7 to 9 mm. long: calyx glabrous, short campanulate, 2 mm. high, slightly broader, with 5 spreading lance-subulate teeth 1 to 1.5 mm. long: corolla 1.2 cm. long, funnel-form, with broad-cordate lobes 4 to 5 mm. long, pubescent within the tube: stamens slightly unequal, a little exserted; filaments pubescent below: fruit 5 to 8 mm. in diameter, red with a bloom. — PUEBLA, near Tehuacan, Nov. 27, 1895 (*C. G. Pringle*, no. 7000). Nearest related, apparently, to *L. cestroides*, Schl., of Brazil.

***Margaranthus sulphureus*.** Annual, glabrous; stem stout and rather fleshy, 4 dm. high, branching above: lower leaves alternate, the upper and those of the branches geminate and unequal, from ovate to broadly rhombic-obovate, subentire or shallowly and bluntly sinuate, the larger 3 to 6 cm. long, 3 or 4 cm. wide, narrowed below to winged petioles varying from 1 to 4 cm. long; upper leaves smaller, sometimes sessile: flowers generally single from each of the upper axils; pe-

duncle slender, somewhat arcuate, in fruit becoming 0.5 to 1.5 cm. long: calyx in anthesis 3 or 4 mm. long, sparingly pilose, with 5 short deltoid ciliate lobes: corolla campanulate-urceolate, 7 to 10 cm. long, nearly as broad, sulphur-yellow, with purple patches at base: fruiting calyx glabrate, globose, 1 to 1.5 cm. in diameter, the short calyx-tips closely connivent. — MEXICO, borders of ditches, Valley of Mexico, July 10, 1865 or 1866 (*Bourgeau*, no. 111), Valley of Mexico, alt. 2,250 m., Oct. 4, 1899 (*C. G. Pringle*, no. 8215). A much coarser plant than the similar *M. solanaceus*, with larger yellower corolla.

**Athenaea Nelsonii.** Stems petioles and pedicels glandular-villous, fuscous: leaves solitary or geminate and very unequal, on petioles 8 cm. or less in length, broadly ovate, acuminate, equally or unequally cordate at base, entire, undulate or slightly sinuate-toothed, the larger 2 dm. long, thin, dark green and minutely pubescent above, pale and appressed-pilose beneath, especially on the nerves: flowers in fascicles of 5 to 15: pedicels at first rather short, in fruit becoming 2 to 3 cm. long: calyx thin, glandular-pilose, short-campanulate, in anthesis 5 to 6 mm. high and broad, rounded or subtruncate at base, the tube hardly equalling the 5 deltoid lobes: corolla yellowish, 1.5 to 2 cm. long, deeply cut into oblong ciliate lobes 1 cm. long: filaments broad at base, inserted midway up the throat of the corolla, rather shorter than the oblong anthers (3.5 to 4 mm. long): fruiting calyx becoming 1 cm. in diameter, inclosing the scarlet berry. — CHIAPAS, between Tumbala and El Salto, alt. 460 to 1,385 m., Oct. 29, 1895 (*E. W. Nelson*, no. 3395). A large-leaved species habitually resembling *A. viscosa*, Benth. & Hook. (*Saracha viscosa*, Schrad., Sweet, Brit. Fl. Gard. ser. 2, t. 323), but with smaller more regular calyx, more deeply lobed corolla and much shorter filaments.

**Physalis subintegra.** Perennial from a very slender root-stock 3 or 4 dm. long, ascending, slightly branching from near the base: stems tough, dark green, sparingly appressed-pubescent with simple hairs or glabrate, about 3 dm. high: leaves from ovate-lanceolate to broadly ovate, 3 to 6 cm. long, 1.5 to 3 cm. broad, entire or slightly repand-dentate, somewhat appressed-pubescent on both surfaces, tapering above to a blunt tip and slightly rounded below to a petiole 0.5 to 2 cm. long: peduncle short, 0.5 to 1 cm. long: calyx in anthesis 7 to 10 mm. long, pubescent, with triangular-lanceolate or ovate acute lobes: corollas pubescent without, the earlier 2.5 cm. broad, the later smaller, sulphur yellow with large dull brown markings at base: one filament slightly exceeding the others, 5 mm. long; anthers oblong, purplish, 2 or 3 mm. long: fruiting calyx globose-ovoid, a little sunken at base, slightly 5-angled, firm and

strongly veiny, 3 to 3.5 cm. long. — MEXICO, Sierra de las Cruces, alt. 3,080 m., Sept. 19, 1899 (*C. G. Pringle*, no. 8225); VERA CRUZ, Orizaba (*Botteri*, no. 207): OAXACA, slopes of Mt. Zempoaltepec, alt. 2,400 to 3,080 m., July 5-10, 1894 (*E. W. Nelson*, nos. 587, 681): JALISCO, between Huejuilla and Monte Escobedo, Aug. 25, 26, 1897 (*J. N. Rose*, nos. 2577, 2606). Nearly related to *P. arenicola*, Kearney, of the southeastern United States.

**P. philippensis.** Freely branching from a stout woody caudex; the slender branches somewhat ligneous at base, about 2 dm. in length, long-pilose with crisp white jointed hairs: leaves appressed-pubescent above, pilose beneath on the veins and ciliate on the margins, broadly rhombic-obovate, coarsely and bluntly angulate-sinuate, 1 to 3 cm. long, 1 to 2.5 cm. wide, broadly subcuneate below to a broad long-pilose petiole 1 to 1.5 cm. long: peduncles 1 cm. long, pilose: calyx during anthesis about 8 mm. long, white-pilose, cleft into narrowly ovate acutish or blunt lobes: corolla short-campanulate, 1.5 cm. long, 2 to 2.5 cm. broad, whitish or pale yellow, with very broad purplish markings: 2 filaments longer than the others, 7 mm. long; anthers short-oblong, purple and yellow, 3 or 4 mm. long: fruit not seen. — OAXACA, Sierra de San Felipe, alt. 2,617 m., June 1, 1894 (*C. G. Pringle*, no. 5621).

**P. sordida.** Perennial, densely pubescent all over with short sordid glandular-pilose hairs: the stems depressed, 4 or 5 dm. long, freely branching: leaves from suborbicular to ovate, coarsely but bluntly sinuate-dentate, subcordate or truncate below, pubescent on both faces, 1 to 5 cm. long, 1 to 3 cm. broad, on slender glandular-pilose petioles 1 to 3 cm. long: peduncles short, barely 1 cm. long in fruit: calyx in anthesis 6 or 7 mm. long, sordid-pubescent, with triangular-lanceolate acute lobes: earlier corollas 1.5 cm. broad, sulphur-yellow, with small drab or brownish patches at base: filaments somewhat unequal; anthers yellow and green, narrowly oblong, 3 or 4 mm. long: fruiting calyx broadly short-ovate, glandular-pilose, not conspicuously angled, 1.5 to 2 cm. long. — Apparently in sand (the entire plant coated with fine sand), OAXACA, Boca de Leon, Telixtlahuaca, alt. 2,310 m., Aug. 8, 1895 (*Albert L. Smith*, no. 637). Nearest related, apparently, to *P. rotundata*, Rydberg, of the southwestern United States.

**P. saltillensis.** Puberulent throughout with fine white stellate hairs: branches slender, terete below, sub-angulate above: leaves elliptic-ovate, coarsely and bluntly sinuate-dentate, the upper unequal and geminate, 3 to 6 cm. long, 2 to 4 cm. wide, unequally subcuneate or rounded at base



to a slender petiole 1.5 to 3.5 cm. long: peduncle filiform, usually curved at tip, in fruit 2 to 3.5 cm. long: calyx in anthesis 6 mm. long, with short narrowly triangular acutish or blunt lobes: corolla 1 to 1.5 cm. broad, sulphur-yellow, with purple patches at base: fruiting calyx ovate, 1.5 to 2 cm. long, obscurely 5-angled, the tips connivent: mature berry orange, edible. — COAHUILA, in shade, Saltillo, Sept. 1898 (*Edw. Palmer*, no. 332).

**P. Rydbergii.** Perennial (?): stem slender, tough, much branched, finely glandular-puberulent: leaves lanceolate to ovate-lanceolate, subentire or shallowly sinuate-dentate, finely glandular-pubescent on both faces, 0.5 to 1.5 cm. long, 3 to 5 mm. broad, acute at tip, tapering unequally at base to slender petioles about half as long: peduncle filiform, in fruit becoming 1 to 1.5 cm. long: calyx open-campanulate, the lobes not connivent at tip, in anthesis 0.5 cm. long, with ovate-lanceolate blunt lobes: corolla barely 1 cm. in diameter, yellow, with 5 acute lobes: fruiting calyx broadly open-campanulate, 1 cm. long, 5-10-angled, strongly reticulate. — MEXICO, Ymala, Sept. 25-Oct. 8, 1891 (*Edw. Palmer*, no. 1713). Dedicated to Per Axel Rydberg, whose critical studies of this genus have greatly cleared the confusion which prevailed in the American species, and to whose unique section *Crassifoliae* the present species is an addition.

**Solanum (Anthoresis) plumense.** Shrub with cinereous smoothish bark: young branches finely pulverulent: leaves ovate-lanceolate, long-acuminate, acutish or rounded at the base, 1 to 1.8 dm. long, 4 to 6 cm. wide, entire or slightly undulate, minutely cinereous-stellate on both faces; petioles slender, 2 to 5 cm. long: corymb on a long cinereous-pulverulent peduncle, in fruit 1 to 1.5 dm. broad, many-flowered: calyx 2 mm. high, cinereous-stellate, with 5 ovate-deltoid bluntish lobes: corolla white, stellate-pulverulent without, 0.5 cm. high, 1.5 cm. broad, with ovate-lanceolate lobes: stamens subequal, oblong, truncate, 2 to 2.5 mm. long: fruit subglobose, sparingly pulverulent, 1 cm. in diameter. — OAXACA, about Pluma, alt. 925 to 1,480 m., March 17, 1895 (*E. W. Nelson*, no. 2493).

**S. (Polymeris) dejectum.** Branching a little above the stout woody root: stems slender, herbaceous, ascending, decumbent at base, branching, cinereous-pilose above with fine stellate hairs: upper leaves geminate, unequal, from subreniform to broadly ovate, rounded or tapering to a bluntish tip, subtruncate or gradually tapering below to a petiole 1 to 3.5 cm. long, finely and closely cinereous-stellate on both faces, more strongly so beneath, entire or slightly undulate, 2 to 5 cm. long:

peduncles slender, in anthesis erect, 0.5 to 1 dm. long, soon strongly dejected: calyx white-stellate, with 10 long linear-subulate divisions: corolla 3 to 4 cm. broad, plicate, 5-angled, violet or violet and white: filaments short, one of them twice or thrice exceeding the others, 5 mm. long; anthers broad-lanceolate, blunt, 5 mm. long: style 10 to 12 mm. long, glabrous: fruit said to be yellow. — DURANGO, rare in crevices of rocks, Iron Mt., &c., near Durango, July, 1896 (*Edw. Palmer*, no. 347): MEXICO, Mount Zacoalco, July 10, 1865 or 1866 (*Hahn*, no. 543); San Juan del Rio, July 14, 1896 (*C. G. Pringle*, no. 7202): GUANAJUATO, in fields, 1895 (*A. Dugès*). Related, apparently, to *S. somniculentum*, Kunze, but differing in its closer whitish pubescence, longer petioles, longer more slender peduncles, and generally blunter leaves.

**S. (Polymeris) nocturnum.** A woody climber with the habit of *S. lentum*, Cav.: branches glabrous, or minutely stellate-puberulent at tips: leaves solitary or geminate, ovate, 2.5 to 5 cm. long, 2 to 3 cm. wide, with acute or obtuse tips, rounded or acutish below to slender petioles 1 cm. or less in length, subentire, glabrous on both faces, or sparingly puberulent when young: peduncles solitary or in 2's, 1 to 2 cm. long, bearing solitary nocturnal blue flowers: calyx, in anthesis sparingly puberulent, later quite glabrate, a shallow cup with 10 lance-subulate teeth; corolla minutely and sparingly puberulent without, 12 mm. high: berry apparently red, glabrous, 1 cm. in diameter. — GUERRERO, low sandy soil, Acapulco, Jan., 1895 (*Edw. Palmer*, no. 533): OAXACA, river-bed above Tehuantepec, Jan. 10, 1896 (*Ed. Seler*, no. 1625).

**S. (Cryptocarpum) macrosolum.** Plant with the habit of *S. rostratum*, Dunal: stem puberulent, slightly glandular above, armed with rather scattered yellowish straight stout spines 1 to 1.75 cm. long: leaves very deeply pinnatifid, the segments again cut into rounded lobes, sparingly pilose above or glabrate, armed with long stout spines: calyx hirsute, becoming glabrate, armed with several long (1.5 cm.) slender spines and many shorter finer ones, deeply cut into lanceolate lobes: corolla as in *S. rostratum*: 4 stamens subequal, 8 or 10 mm. long, the other larger, arcuate, 18 mm. long: fruiting calyx, including the persistent lobes, 15 to 18 mm. long. — OAXACA, near the town of Oaxaca, Sept. 19, 1895 (*L. C. Smith*, no. 814), Nov. 18, 1895 (*Ed. Seler*, no. 1394): originally collected by Haenke, presumably between Acapulco and the City of Mexico.

**S. (Nycterium) azureum.** Stem fruticose, the young branches, with peduncles pedicels and calyx, cinereous with dense but fine stellate pubescence; the branches sparingly beset with remote straight slender

brown spines 7 mm. or less in length: leaves solitary or the upper geminate, thin, elliptic-ovate, 4 to 9 cm. long, 2 to 3.5 cm. broad, deeply sinuate-pinnatifid into 5 or 7 unequal oblong or obovate entire or undulate obtuse lobes; above green and thinly pubescent with appressed-stellate hairs, beneath slightly more pubescent, especially on the prominent sometimes sparingly short-setulose nerves; petioles slender, 1 to 3.5 cm. long, often sparingly setulose: peduncles lateral, 5-10-flowered, becoming 6 or 7 cm. long: calyx campanulate, in the staminate flower unarmed, in the pistillate with slender spines 5 mm. or less in length, the 5 lance-subulate teeth 8 or 9 mm. long: corolla 4 or 5 cm. broad, plicate, stellate-tomentose without, apparently sky-blue, slightly irregular, deeply cut into 5 ovate-lanceolate curved segments: anthers yellow, subsessile, in the staminate flower the two shorter ones 1 to 1.5 cm. long, the three longer 3 to 3.5 cm. long, strongly curved above; in the hermaphrodite flower the two short anthers scarcely 1 cm. long, the three long ones straight, 1.5 cm. long: style 2.5 cm. long, strongly curved above: fruit globose, 1.25 cm. in diameter, in herbarium specimens olive-brown; the fruiting-calyx deeply cleft, excluding the fragile elongated lance-subulate tips, about half the height of the fruit. — SINALOA, Topalobampo, Sept. 15-25, 1897 (*Edw. Palmer*, no. 178). Related to the common *Solanum amazonium*, Ker, and to *S. obtusifolium*, Mart. & Gal. From *S. amazonium* it differs principally in its thin deeper-lobed and greener leaves, its longer stamens and shorter fruiting-calyx. From *S. obtusifolium* as described it is separated by its larger leaves which are not "cordate-ovate," and its much larger flowers.

**Datura villosa.** Annual, 1.5 to 3 dm. high: young branches and petioles villous with long white hairs: leaves 0.5 to 1 dm. long, petiolate, ovate, sinuate-angulate or deeply cut, villous above and especially beneath on the veins, becoming glabrate: calyx cylindric, 2.5 to 3.5 cm. long, somewhat villous, with 5 short teeth: corolla narrow, twice exceeding the calyx, pale below, purplish at edge, with 5 short lance-subulate teeth: capsule puberulent, about 5 cm. across, armed with comparatively few coarse and unequal flat prickles. — JALISCO, Bolaños, Sept. 10-19, 1897 (*J. N. Rose*, no. 3680): SAN LUIS POTOSI, in sand near the city of San Luis Potosi, 1876 (*J. G. Schaffner*, no. 706); in the mountains at 1,850 to 2,450 m., 1878 (*Parry & Palmer*, no. 658, in part). — Related to *D. quercifolia*, HBK., with which it has been confused.

**CESTRUM ELEGANS**, Schlecht., var. **truncata**. Like the species as

represented in Bot. Reg. xxx. t. 43, but with the corolla limb merely short-toothed or subentire, not definitely lobed. — VERA CRUZ, San Miguel del Soldado, alt. 1,850 m., April 20, 1899 (*C. G. Pringle*, no. 7800).

**C. fulvescens.** Branches stout; cortex yellowish brown, pruinose or glabrate: leaves lanceolate or ovate-lanceolate, short-acuminate, 4 to 7 cm. long, 1 to 2 cm. wide, on slender petioles 1 to 2 cm. long, dark green and minutely puberulent above, yellow-green and puberulent beneath: inflorescences on short (1 dm. or less) leafy fulvous-pubescent branches; the flowers in small axillary clusters or more abundant at the naked tip; pedicels 3 to 7 mm. long, jointed below the very slender neck (3 mm. long) of the calyx: tubular-campanulate calyx broadened above, 1.5 to 2 cm. long, glabrous, conspicuously nerved, with 5 (or 6) unequal deltoid acute ciliate lobes 4 mm. or less in length: corolla 2.5 to 3 cm. long, the yellow tube slender, slightly exceeding the calyx, clavate above and enlarged at the throat; limb of 5 (or 6) elongate-lanceolate strongly involute ascending yellow-brown lobes, short-pubescent especially within. — OAXACA, mountains of Telixtlahuaca, alt. 2,000 m., Apr. 5, 1895 (*L. C. Smith*, no. 343). Apparently a member of the section *Habrothamnus*, but with paler flowers than in any described species of that section.

**C. Bourgeauianum.** Branches slender, glabrous, covered with a grayish brown cortex: leaves glabrous, entire, oblong-lanceolate to oblong-elliptic, acutish, including the short petiole 4 to 6 cm. long, 1 to 2.5 cm. wide: inflorescence leafy-paniculate, of mostly compound sparingly bracteate flexuous or drooping long-peduncled racemes 4 to 9 cm. long: pedicels slender, 3 to 9 mm. long, gradually thickened to the glabrous campanulate shallowly 5-cleft calyx (in anthesis 4 to 5 mm. long, 2 to 3 mm. broad): corolla yellow, glabrous throughout, 1.7 to 2 cm. long, narrowly funnelform below, gradually broadened at the throat; limb with 5 generally broad-flaring somewhat rounded lobes nearly 0.5 cm. long: mature fruit nearly 1 cm. in diameter; calyx becoming as broad as long. — MEXICO, Valley of Mexico, June 12, 1865 or 1866 (*Bourgeau*, no. 57): OAXACA, Mts. southeast of Miahuatlan, alt. 2,950 to 3,235 m., 1895 (*E. W. Nelson*, no. 2525). This is perhaps *C. pedunculare*, Pavon, but that species is described as having glandular reddish branches, purplish-veined leaves, and acuminate corolla-lobes.

**Aster jalapensis.** Perennial from slender elongated rootstocks: stems decumbent at base, 1 to 2.5 dm. high, slender, very leafy, pilose in lines: leaves oblanceolate, bluntly and shortly acuminate, glabrous or

minutely puberulent, the upper half coarsely appressed-serrate, the lower half entire and cuneate to a narrow-winged subpetiolar strongly ciliate base, including the subpetiolar portion 3 to 5 cm. long, 0.5 to 1 cm. wide; the upper smaller: peduncles slender, bracteate, elongate, 2 to 6 cm. long, bearing 1 or 2 heads about 1 cm. broad: bracts of involucre 3-seriate, linear-oblong, the inner 6 mm. long, the outer much shorter, slightly ciliate on the margins, with short bluntish herbaceous appressed tips: rays white: achene pubescent. — VERA CRUZ, wet ledges, Barranca de Chavarrillo, alt. 920 m., Apr. 24, 1899 (*C. G. Pringle*, no. 8118). Somewhat resembling *A. bullatus*, Klatt, but a lower more slender plant with shorter broader leaves, broader involucral bracts, and more slender peduncles.

***Encelia Pringlei*.** Stem subterete, scabrous-puberulent: leaves oblong or ovate-lanceolate, acuminate, the lower rather abruptly narrowed below the middle into an oblong portion which is somewhat auriculate at base; the larger 1.2 to 1.4 dm. long, 4 to 6 cm. wide, above tuberculate-scabrous; beneath scabrous, glandular-dotted, and somewhat villous on the nerves; petioles very short: inflorescence terminal, corymbose, 1 to 1.5 dm. across: heads 1 to 1.5 cm. broad, excluding the rays 1.5 cm. long: bracts of involucre 2-3-seriate, the outer successively shorter, linear-oblong, bluntish, appressed-pubescent and somewhat glutinous: rays 8 or 9, ovate-oblong, 1 cm. long, orange-yellow: achene 6 mm. long, silvery-silky; the pappus of two lanceolate awn-tipped pales 4 or 5 mm. long, and two shorter broader somewhat lacerate ones. — HIDALGO, hillsides above Pachuca, alt. 2,770 m., Sept. 14, 1899 (*C. G. Pringle*, no. 8248). With remarkably paleaceous pappus for an *Encelia*, but apparently very closely related to *E. glutinosa*, Rob. & Greenman.